



North Carolina Enterprise Electronic Forms and Digital Signatures

Quarterly Report October 2012

North Carolina Office of the State Controller

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October 1, 2012**

Table of Contents

I. Authentication 3

A. Approach 3

B. Chosen Solution 3

C. Initial Deployments 6

D. Benefits..... 6

E. Next Steps..... 7

II. Automation Capability Project (eForms) 7

A. Procurement..... 7

B. Initial Deployments 8

C. Benefits..... 9

D. Next Steps..... 10

III. Accomplishments 10

IV. Challenges 11

VI. Timeline..... 12

Appendices..... 13

Session Law 2011-0145, House Bill 200, directed the State Controller to take the necessary measures to enable a coordinated enterprise electronic forms and digital signatures capability. The Office of the State Controller (OSC) has been working with agencies across the State to determine the best approach and to procure contracts with vendors to provide the needed services.

I. Authentication

A. Approach

The **Authentication Project** focuses on digital signatures, eliminating resource-intensive processes that require agencies, citizens and staff to manually sign documents.

The goal is to develop a Software as a Service (SaaS) solution enterprise authentication capability that will:

- Automate simple forms.
- Provide offerings that are secure.
- Provide auditable evidence that appropriate processes have been followed.
- Be used easily by individuals for *ad hoc* signing.
- Be integrated with automated business processes.
- Mobility – Anyone, anything, anywhere, and anytime.

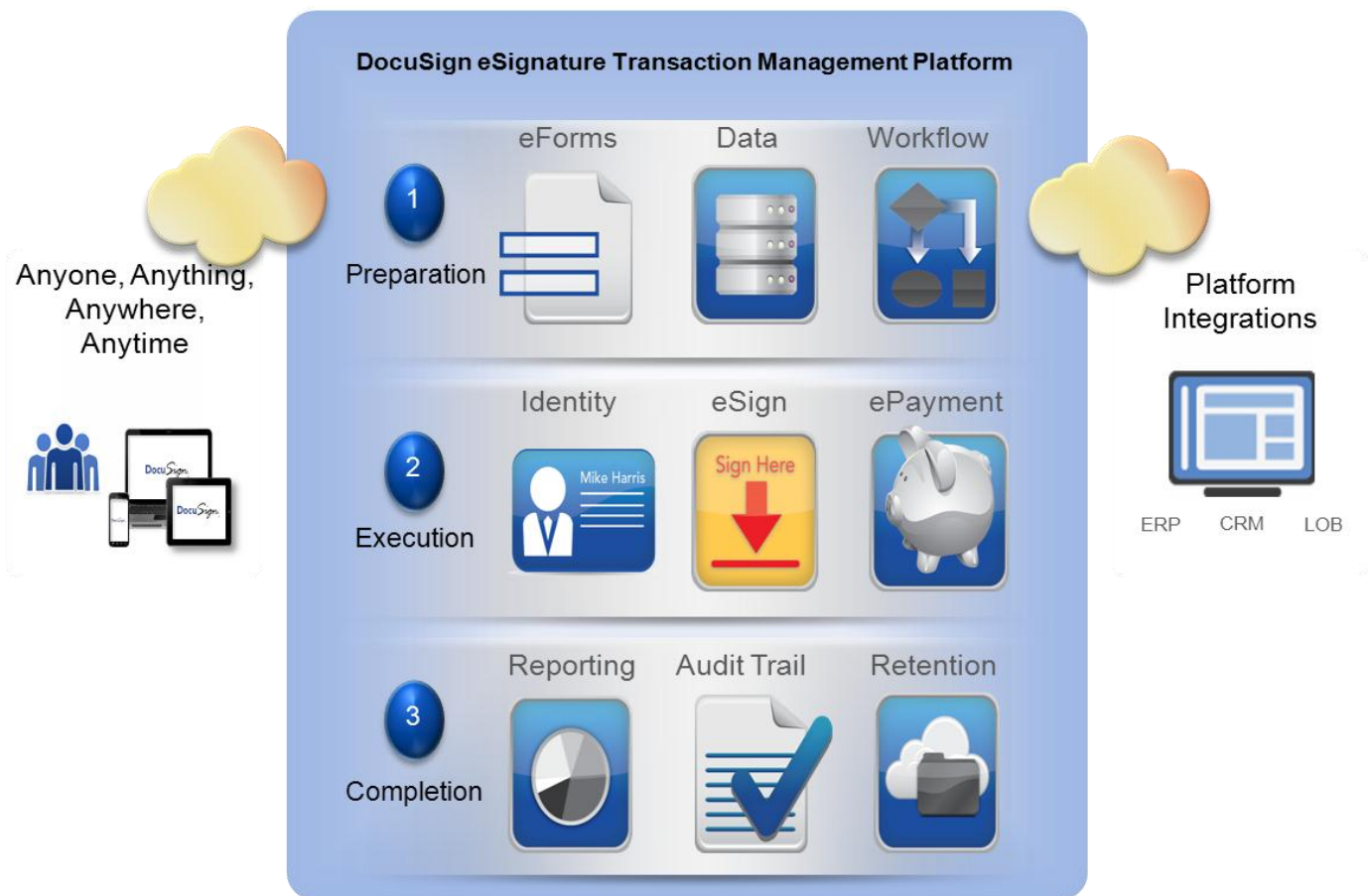
Based on feedback from agencies, OSC's role in this capability is to proceed with a decentralized approach. This approach will allow OSC to enter into a contract with a vendor and allow agencies to access services, as they need them.

B. Chosen Solution

On March 14, 2012, the Office of the State Controller (OSC), based on input from the Authentication Workgroup, issued a Request for Proposal (RFP) for an indefinite quantity contract that would provide tiers of pricing based on transaction volume. Although the quantity of goods or services is undetermined at this time, OSC provided vendors with an Inventory of Forms that represented the potential quantity of forms to be automated and digitally signed. This inventory contains approximately 700 forms that are used in more than five million transactions annually within State government.

In August 2012, OSC awarded the contract to DocuSign, Inc. (www.DocuSign.com). This vendor provided the highest and broadest set of security certifications with an easy-to-use interface for automating forms. DocuSign documents are legally binding by meeting the requirements of the U.S. eSign and North Carolina UETA (Uniform Electronic Transactions Act).

The workflow capability will allow for electronic approval and signoff. The solution also provides audit trail and repudiation functions, and mobile device support. Citizens will find it easier to do business with the State because they will be able to sign forms and documents anytime, anywhere and from nearly any web-accessible device. Agencies can purchase “envelope” transactions (which include unlimited attachments, signers, certified delivery recipients, and carbon copy receipts), seat licenses, or a combination of the two. The contract also includes unlimited storage and hosting of all documents in the cloud or ability to store locally. A high-level overview of the solutions capabilities is listed below:



The convenience contract is available for use by Executive Branch agencies as well as non-State agencies as permitted by law. Such entities include the North Carolina University System and its member campuses, instructional components of the Department of Public Instruction, instructional components of the North Carolina Community College System, as well as local (municipal and county) governments. This convenience contract is a “tiered” volume pricing model that allows the leveraging of the “State” purchasing volume.

OSC is working with agencies to create an on-boarding plan and providing assistance in determining level(s) of assurance that may be needed for their business processes. OSC and the agency will determine which forms may be easily automated, the priority for applying digital signatures, and the potential back-end integrations. After a four-month internal trial of converting OSC's paper travel and reimbursement forms to this electronic process, OSC found the automated workflow was twice as fast in each of the approval steps. In other words, the time to process a form was cut in half.

User comments on OSC's prototype project of DocuSign:

- "Ability to post notes to approvers and receive notes if declined – nice feature – time reducing in phone calls."
- "Being that I am on the road a lot, it's much easier to submit these electronically."
- "From an approver perspective, I appreciated the speed with which forms could be submitted, approved/declined and processed regardless of whether or not the traveler was physically in the office."
- "The electronic work flow facilitates approval or disapproval since the reviewers and approvers can act upon the process even if off-site."

The prototype participants found the DocuSign solution to be easy to use, with screens that intuitively helped them through the process. A sample screenshot is below.

DocuSign

Home Manage Send Dashboards

Levyland 2964778

To: Craig Approval Levy [craig.approver@gmail.com]; Signer 1 []; Craig Counter Signer Levy [craig.levy@docuSign.com]; Any Signer [orderprocessing@inbox.com];

Message: Please take 30 seconds to complete this DocuSign demonstration

for: Standard Custom

Signature

Initial

Attachment

Name

Any

Signed

Date

Field

Box

Button

Down

Let's say, we've agreed to terms and we are ready to complete a contract, or perhaps an application. Or perhaps, only a few adjustments or negotiations are still required. It's now time to get a signature, along with a Date/Time stamp of the transaction. In this case, the client's company name is an optional field and not required to allow for signing.

Take special note of the new DocuSign ID card

Company

Client's Company (if required)

Sign Here

Client Signature

Full Name

Client Name (printed)

Date Signed

Send Preview <Go Back | Save Draft | Discard Changes

☐ Use Advanced Sending

C. Initial Deployments

In September 2012, three initial deployments were initiated:

- 1) **NCID Integration** – The DocuSign solution must be integrated with NCID. This integration effort is estimated to take six weeks.
- 2) **Travel and Reimbursement Form Pilot** - Approximately 110,000 travel reimbursements are processed annually for State agencies using the North Carolina Accounting System (NCAS). Each employee uses a travel and expense spreadsheet which, along with supporting receipts, is routed through an approval workflow. Currently this is all done manually with paper forms and wet-ink signatures. At the end of the process, data is entered into NCAS. This initial deployment will be the automation of the form, travel receipts, workflow process and digital signature(s).

OSC is creating and managing a template for the Travel and Reimbursement form that agencies will be able to use. Agencies will have the option to add additional information to the form that is required for their employees' reimbursement to be processed.

Since deployment encompasses all state agencies and includes training, user set-up and template modification, this initial deployment will take at least nine months. By deploying this form enterprise-wide, OSC will facilitate adoption of the contract by state agencies.

3) SBI Name Check Release Form Project

Individuals applying for certain state jobs must undergo a name check. When an employing agency wants to hire a person into such a position, the employing agency's authorized representative provides the applicant with an Authorization for Release of Information (AFR) form.

Approximately 20,000 requests are sent to the SBI each year, many from state agencies such as Health and Human Services. OSC is working with the North Carolina Department of Justice on an electronic signature capability to allow potential candidates applying for agency positions to digitally sign the release form and send it to the hiring agency which can review and then route to the SBI for processing.

D. Benefits

Expected benefits of full deployment of the authentication system include:

- **Processing time:** Time to process forms cut in half.

- **Printing:** Typically a form is printed for review, for the employee, and for office storage. Savings on a single form can be hundreds of thousands of dollars across the enterprise.
- **Storage:** Including file cabinets and the space to hold them.
- **Staff:** Staff time to store and retrieve documents. If it takes 10 minutes to file a form and 10 minutes to retrieve it (see <http://www.lucion.com/paperless-calc.html>), thousands of hours of staff time are saved per form.

E. Next Steps

- Work with agencies to promote the contract and encourage on-boarding. (*More information about the digital signature project can be found at www.osc.nc.gov/SECP/SECP_eForms_Digital_Signatures.html*)
- Market the capability to agencies and other potential users through:
 - OSC website
 - Presentations to CIOs/CFOs and Deputy Secretaries
 - eCommerce conference (hosted by OSC), October 30, 2012
 - N.C. Local Government Information Systems Association Conference, October 18, 2012
 - Association of Community College Business Officer Conference, October 23, 2012
- Train at least one administrator in each agency.
- OSC to hire staff to work with Agency personnel to determine how best to apply Digital Signatures to their existing processes, and provide training and help desk support. (NOTE: **Three positions were requested in OSC's FY2012-13 expansion budget and will be resubmitted in OSC's FY2013-15 expansion budget request to assist agencies with both of these projects. Without these positions, implementation will be slower, cost avoidance not realized, and potential support problems may occur.**)
- Initial deployments.

II. Automation Capability Project (eForms)

A. Procurement

The goal of the Automation Capability Project (initially called *eForms*) is to develop an enterprise automation capability that will focus on eliminating paper forms, reducing processing time, eliminating duplicate data entry, improving data integrity and automating the workflow. OSC has determined that focusing on inspections, licensing and permitting will allow the project to be scaled and right-sized into manageable components.

OSC will establish a convenience contract for an indefinite quantity contract that will be available for use by Executive Branch agencies as well as non-State agencies permitted by law. Such entities include the North Carolina University System and its member campuses, instructional components of the Department of Public Instruction, instructional components of the North Carolina Community College System, as well as local (municipal and county) governments.

The core system will be centrally managed by the Office of the State Controller with each agency being able to configure the system according to their own needs so it will meet their different business processes for a wide variety of inspection licensing and permitting processes. OSC will also provide assistance with process re-engineering, training in conjunction with the vendor, and help desk support.

OSC is working to provide a cost-effective solution, meet a widespread need, provide maximum, successful results, and create efficiencies and cost savings for agencies.

On May 17, 2012, the cross-agency Automation Workgroup released the RFP. Proposals were received on June 26, 2012. The Automation Workgroup is in the process of evaluating the proposals.

An award is expected in late October or early November 2012.

B. Initial Deployments

The workgroup reviewed potential initial deployment projects. These will be the first projects undertaken once a vendor is selected:

- 1) The Department of Labor (DOL) elevator inspections. DOL has documented the business process in detail, which will assist in automation. Thirty-five inspectors in Labor's Elevator and Amusement Device Bureau inspect all 23,000 elevators in the state on an annual basis, and violations often require follow-up inspections. This process is often backlogged.
- 2) The Department of Environment and Natural Resources (DENR) sedimentation and erosion control permits. The purpose of the sedimentation and erosion permit is to prevent sedimentation damage to streams and adjacent properties from construction activities (ensuring compliance with the Sedimentation and Pollution Control Act of 1973). The yearly average of sedimentation inspections is 18,756, and violations may require a number of actions, including referral to enforcement.
- 3) OSC will work with agencies to identify a licensing process to deploy in parallel.

The initial deployments are expected to take approximately six to nine months for full implementation. However, other agency deployments may be implemented in parallel depending on the vendor, agency and OSC resources.

C. Benefits

The Inspections, Licensing and Permitting Automation Capability Project will reduce paper, reduce processing times, eliminate duplicate data entry, improve data integrity, and provide for on-line service options. Expected benefits from the initial deployment are described below.

Elevator Inspections Benefits

For the Department of Labor (DOL), automating elevator inspections will increase effectiveness and efficiency, as well as:

- Increase of at least five to seven percent in the number of inspections per inspector during the first year.
- Second-year increase of at least an additional five to seven percent inspections per inspector.
- In two years, reduce the current 14-month inspection cycle to the mandated 12-month cycle without adding additional inspectors (16 percent overall improvement in cycle time) while simultaneously improving inspection quality and customer service levels.

Elevator inspectors, office assistants, elevator owners and elevator bureau management will experience efficiencies. According to the Department of Labor, the general public will experience improved safety of elevators and fewer injuries and fatalities due to the increased efficiency and greater effectiveness.

Sedimentation and Erosion Control Automation Benefits

Expected benefits of DENR's Erosion and Sediment Control Automation project include:

- Better customer service through an organized and transparent regulatory process.
- Decreased processing times through direct inputs instead of handwritten forms entered into a system.
- Improved data accuracy.
- Improved workflow management.
- Staff time savings from eliminating manual data entry.

- Fewer status calls.
- Cost savings for the Department and the customer.
- Improved tracking, scheduling and reporting.

Customers will save time and money. The entire construction project must wait for approval before beginning a project. As a result, the customer can accumulate significant interest on their construction loan if the delay is protracted.

The State will save on certified mail, postage, printing, ink, envelopes and paper. Any staff savings could be redirected to plan reviews during peak times, process improvements, customer follow-up and other customer service tasks.

D. Next Steps

- Review proposals.
- Negotiate and award contract in November 2012.
- **Hire staff at OSC** to assist with on-boarding, training, managing and maintaining the core system and Tier 2 help desk support.
- Initial deployments
- Develop on-boarding schedule based on the projects listed in Appendix E.

III. Accomplishments

- ✓ Assembled workgroups.
- ✓ Identified initial deployments.
- ✓ Gathered requirements.
- ✓ Conducted agency meetings.
- ✓ Wrote two requests for proposal.
- ✓ Completed pilot prototype for digital signature.
- ✓ Submitted an expansion budget request for software, hardware, and staffing needs.
- ✓ Issued two RFPs.
- ✓ Evaluated responses for one RFP (Authentication).
- ✓ Communication Plan completed.
- ✓ Awarded Digital Signature contract.

IV. Challenges

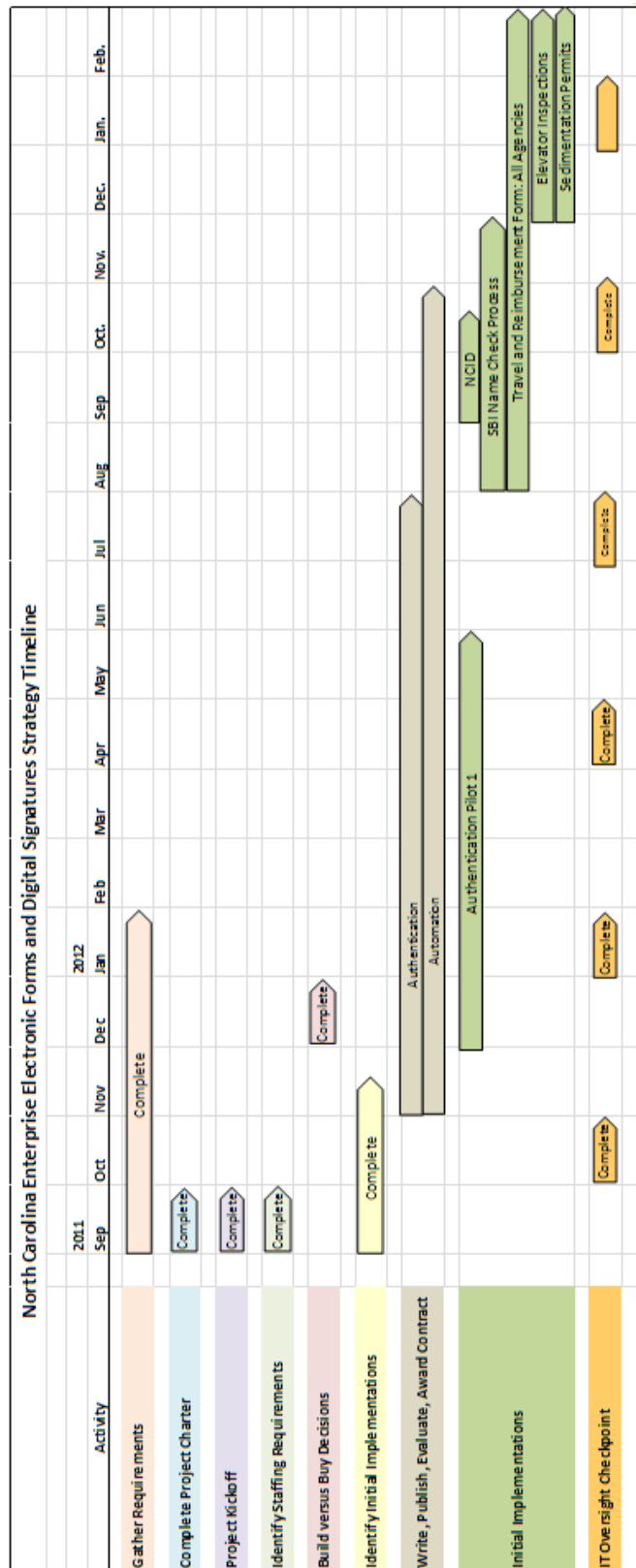
OSC has identified several challenges that could inhibit the successful implementation of the Authentication and Inspections, Licensing and Permitting Automation Capability Projects.

- **Support Staff:** Support for the agencies through project management, business process re-engineering, core system support, and training is required for the capability to be embraced and implemented at a rapid and efficient pace. Three **permanent** positions were requested this past short session (FY 2012-13) to assist agencies with both of these projects. The request was not funded. OSC will be resubmitting this request for the FY2013-15 expansion budget request.

Session Law 2011-145 House Bill 200 Section 6A.1.(d) required the SCIO to identify four positions in the Office of the State Chief Information Officer that shall be used, effective August 1, 2011, to support planning and implementation of an automated fraud detection capability and an eForms/Digital signature project. The SCIO office has assigned a full-time ITS employee as the project manager. Additionally, the SCIO has agreed to cover the cost of the two additional positions in FY2012-13 by issuing a **one-time** credit against IT services supplied to OSC. The credit is equivalent to the annual salary and fringe of the two positions and both will support the eForms and Digital Signature projects. This will allow OSC to hire time-limited positions for the support of these systems. Recruiting and hiring highly qualified individuals in **time-limited** positions (temporary) for “production” systems that agencies will rely solely upon to conduct their day-to-day business poses is an enormous but avoidable risk.

- **Hosting Cost:** Support for the ongoing infrastructure costs for hosting the enterprise solution at the Office of Information Technology Services is estimated to cost between \$250k to \$300k per year. **Recurring** dollars must be identified in order to cover these costs which have been requested in the FY2013-15 expansion budget request.

VI. Timeline



Appendices

Appendix A: SESSION LAW 2011-0145, HOUSE BILL 200

Session Law 2011-145 asked the State Controller to provide enterprise capability for eForms and digital signatures. The law asked for costs, priorities and milestones. Agency requirements must be part of the planning process.

SECTION 6A.18. (a)

Under the direction of the State Controller, the State shall plan, develop, and implement a coordinated enterprise electronic forms and digital signatures capability. In developing this capability, the State Controller shall determine the cost of converting forms to an electronic format, determine priorities for converting forms, and establish milestones for completing this conversion. The State Controller shall integrate executive branch agencies already in the process of developing electronic forms and digital signatures projects. Before beginning this effort, the State Controller shall determine specific agency requirements and incorporate their requirements into its planning efforts.

SECTION 6A.18. (b) Beginning October 1, 2011, the State Controller shall present quarterly reports on the status of the project to the Joint Legislative Oversight Committee on Information Technology.

Appendix B: Background

Session Law 2011-0145, House Bill 200, directed the State Controller to take the necessary measures to enable a coordinated enterprise electronic forms and digital signatures capability. The Office of the State Controller (OSC) has been working with agencies across the State to determine the best approach. While there are intersections between eForms and digital signatures:

- Automating business processes (eForms) does not always involve digital signatures.
- Digital signatures can be plugged into an automated business process.
- Solutions in the marketplace are often separate.

A survey of high-level agency requirements and some of the available mature solutions have led OSC to organize this effort in two projects:

- The **Authentication Project** focuses on digital signatures, eliminating resource-intensive processes that require agencies, citizens, and staff to manually sign documents.
- The **Automation Capability Project** focuses on helping agencies be more efficient while eliminating paper processes by automating complex processes that encompass multiple forms and checkpoints. It will focus on inspections, licensing and permitting.

OSC is committed to working across all agencies to provide practical and useful solutions. Agency participation is broad and enthusiastic. (See Appendix C and D for workgroup membership.) OSC is also ensuring agency awareness by updating all CIOs at their monthly meetings.

Further, OSC notes the statute's specification of an *enterprise capability* for executive branch agencies. OSC has a history of providing successful capabilities at the state enterprise level (i.e., PayPoint), and believes an enterprise offering with flexible on-boarding leads to better adoption than an enforced solution. To maximize agency participation, OSC is focusing on providing solutions that meet widespread needs, are cost-effective, easy-to-use and easy to access.

Based on feedback from agencies, OSC will proceed with a decentralized approach on the projects. This approach will allow OSC to enter into contracts with vendors and allow agencies to access services as they need them. OSC's role will be to provide contract administration, on-boarding assistance, training to agencies in coordination with the vendors, core system implementation and maintenance, and help desk support. Agencies will be able to maintain their own forms, workflows, and configurations that meet their business needs. The two cross-agency workgroups determined that the best use of scarce resources is to purchase solutions from vendors, rather than to build these capabilities in-house.

Appendix C: Authentication Workgroup Membership

Patrick Blalock, Department of Health and Human Services

Bob Brinson, Department of Public Safety

Bobby De Clippelaar, Department of Justice

Kelly Eubank, Department of Cultural Resources

Mike Fenton, Office of the State CIO

Bob Giannuzzi, Office of the State CIO

William Haney, Information Technology Services (ITS)

Sharon Hayes, Office of the State Controller

Ginger Helms, Administrative Office of the Courts

Dan Kempton, Department of Revenue

Kirk Leggott, Industrial Commission

Tom Newsome, Office of the State Controller

Lois Nilsen, Office of the State CIO

Pete Powell, Administrative Office of the Courts

Patricia Ray, Information Technology Services (ITS)

Charles Richards, Office of the State CIO

Ozie Stallworth, Office of the Secretary of State

Jim Tulenko, Office of the State Controller

Appendix D: Inspections, Licensing and Permitting Automation Workgroup Membership

David Alford, Department of Transportation

Mike Fenton, Office of the State CIO

Bob Giannuzzi, Office of the State CIO

Sharon Hayes, Office of the State Controller

Dan Kempton, Department of Revenue

Chris Lehenbauer, Department of Labor

Mike Mason, Office of the State Controller

Edythe McKinney, Department of Environment and Natural Resources

Tom Newsome, Office of the State Controller

Lois Nilsen, Office of the State CIO

Jane Price, Department of Agriculture

Charles Richards, Office of the State CIO

Appendix E: Potential Future Deployments of Inspections, Licensing and Permitting Automation System

Listed below are potential projects that have been identified. OSC believes there is even further potential for the requested solution.

Department of Agriculture

Anticipated Deployment	Anticipated Number of Inspections/Permits / per Year	Total Number of Professional and Business Licenses	Current Professional and Business Licenses (New or Renewed)	Anticipated System Users	Concurrent System Users
Fertilizer (PIFF)		710	446	2	2
Plant Protection (PIPP)	6500	8492	4637	3	3
Seed (PISE)		6882	4612	4	2
Structural Pest (SPSP)	5600	8653	5253	15	10
Pesticide (FDPR)	850	21378	14778	15	10
Pesticide (FDPE)	7050	25152	12542	17	10
Sleep Products	3000	1700	1700	5	2
Animal Welfare (VEVE)		1151	750	9	6
Avian/Livestock (VERL)		3677	1565	10	3
Food (FDCL)		5191	842	5	2
Prescription Drug (FDPD)		2290	1560	3	2
LP Gas (STLP)	6676	2653	1602	5	3
Scale & Petroleum Device (STSL)		3071	1304	1	1
Weighmaster (STWM)		12032	6603	5	2
Fiscal Mgmt Grain (ADFM)		612	354	2	2

Department of Labor

Anticipated Deployment	Anticipated Number of Inspections/ Permits per Year	Anticipated Number of Professional and Business Licenses	Anticipated Users	Concurrent System Users
Migrant Housing Annual Inspection	1400		10	5
Boiler and Pressure Vessel Inspections	45,000		100	25
Youth Employment Certificates		85,000	3	1

Department of Transportation

Anticipated Deployment	Anticipated Number of Inspections/ Permits per Year	Anticipated Number of Professional and Business Licenses	Anticipated Users	Concurrent system users
Driveway Inspections	2000	0	25	15
Outdoor Advertising	1000	0	10	7

Department of Environment and Natural Resources

The Department of Environment and Natural Resources manages 140 types of permits, plans, licenses and certifications, across air quality (e.g., air permits), water quality (e.g., animal waste permits), waste management (e.g., hazardous waste management), land management (e.g., mining permits), and marine fisheries (e.g., commercial fishing vessel registration).